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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,738	02/16/2001	Margret Maria Sauter	2283/201	3348

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EXAMINER	
COLLINS, CYNTHIA E	
ART UNIT	**PAPER NUMBER**
1638	13

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,738	SAUTER ET AL.	
	Examiner	Art Unit	
	Cynthia Collins	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-36* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-2, 4-8, 25-29, 31 and 33-36, drawn to a transgenic plant, plant cell or protoplast or host cell comprising a nucleotide sequence for an SH2A or SH2A-like gene, and to a construct comprising a nucleotide sequence encoding an SH2A or SH2A-like protein, classified in class 536, subclass 23.6. For Invention I, restriction to a single nucleic acid sequence is also required under 35 USC 121. Therefore, if Invention I is elected, a single nucleic acid sequence must also be elected.

II. Claims 3 and 33-36, drawn to a transgenic plant comprising an SH2A or SH2A-like protein, classified in class 800, subclass 370.

III. Claims 9, drawn to a method for modulating growth or survival of cultured cells under hypoxic conditions by modulating the level or activity of an SH2A or SH2A-like protein, classified in class 435, subclass 471, for example.

IV. Claims 10-17, drawn to a method for modulating growth response in cultured cells and a method for modulating growth response in an organism by modulating the level or activity of an SH2A or SH2A-like protein, classified in class 435, subclass 455, for example.

V. Claim 18, drawn to a method for producing a plant which is adapted to growth in hypoxic conditions by transformation using a coding sequence for an SH2A or SH2A-like gene, classified in class 800, subclass 290, for example.

VI. Claim 19, drawn to a method for improving survival of a plant in conditions of low oxygen, classified in class 800, subclass 278, for example.

VII. Claim 20, drawn to a method for improving water logging tolerance in a plant by transformation using a coding sequence for an SH2A or SH2A-like gene, classified in class 435, subclass 468, for example.

VIII. Claims 21-22, drawn to a method for inducing gibberellin biosynthesis in a plant or plant cell by transformation using a coding sequence for an SH2A or SH2A-like gene, classified in class 800, subclass 260, for example.

IX. Claims 23-24, drawn to a method of regulating an anaerobic response protein in a plant cell by transformation using a coding sequence for an SH2A or SH2A-like gene, classified in class 435, subclass 446, for example.

X. Claim 30, drawn to a construct comprising an SH2A or SH2A-like gene promoter, classified in class 435, subclass 320.1, for example.

XI. Claim 32, drawn to an isolated SH2A-like protein, classified in class 530, subclass 370, for example. For Invention IX, restriction to a single amino acid sequence is also required under 35 USC 121. Therefore, if Invention IX is elected, a single amino acid sequence must also be elected.

The inventions are distinct, each from the other because of the following reasons:

The polynucleotide sequences of Invention I are unrelated to each other. The polypeptide sequences of Invention XI are also unrelated to each other. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the

instant case the different inventions represent structurally different polynucleotides or structurally different polypeptides. Therefore, where structural identity is required, such as for hybridization, expression or immunization, the different sequences have different effects.

Inventions I-II and X-XI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions and different effects. The transgenic plant and construct of Invention I comprise a nucleotide sequence encoding an SH2A or SH2A-like protein, which is structurally and functionally different from the transgenic plant of Invention II, the construct of Invention X, and the protein of Invention XI, and can be used in a different method, such as a method of producing a recombinant protein. The transgenic plant of Invention II comprises an SH2A or SH2A-like protein, which is structurally and functionally different from the transgenic plant and construct of Invention I, the construct of Invention X, and the protein of Invention XI, and can be used in a different method, such as a method of breeding. The construct of Invention X comprises an SH2A or SH2A-like gene promoter, which is structurally and functionally different from the transgenic plant and construct of Invention I, the transgenic plant of Invention II, and the protein of Invention XI, and can be used in a different method, such as a method of transcription. The protein of Invention XI is structurally and functionally different from the transgenic plant and construct of Invention I, the transgenic plant of Invention II, and the construct of Invention X, and can be used in a different method, such as an immunoassay method.

Inventions III-IX are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, or different effects. The method of Invention III modulates growth or survival of cultured cells under hypoxic conditions by modulating the level or activity of an SH2A or SH2A-like protein, which is not required by the methods of Inventions IV-IX. The method of Invention IV modulates growth response in cultured cells or in an organism by modulating the level or activity of an SH2A or SH2A-like protein, which is not required by the methods of Inventions III and V-IX. The method of Invention V produces a plant which is adapted to growth in hypoxic conditions by transformation using a coding sequence for an SH2A or SH2A-like gene, which is not required by the methods of Inventions III-IV and VI-IX. The method of Invention VI improves the survival of a plant in conditions of low oxygen by transformation using a coding sequence for an SH2A or SH2A-like gene, which is not required by the methods of Inventions III-V and VII-IX. The method of Invention VII improves water logging tolerance in a plant by transformation using a coding sequence for an SH2A or SH2A-like gene, which is not required by the methods of Inventions III-VI and VIII-IX. The method of Invention VIII induces gibberellin biosynthesis in a plant or plant cell by transformation using a coding sequence for an SH2A or SH2A-like gene, which is not required by the methods of Inventions III-VII and IX. The method of Invention IX regulates an anaerobic response protein in a plant cell by transformation using a coding sequence for an SH2A or SH2A-like gene, which is not required by the methods of Inventions III-VIII.

Inventions I and V-IX are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product, such as a method of producing a recombinant protein.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, their recognized divergent subject matter, and the requirement for different areas of search, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Remarks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
July 1, 2002

Phuong Bui 7/1/02
PHUONG T. BUI
PRIMARY EXAMINER